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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/535,303 | 03/24/2000 | Yasuaki Namura | 32430 | 2303 |

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EXAMINER

TRAN, KHANH C

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 05/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/535,303

Applicant(s)

NAMURA, YASUAKI

Examiner

Khanh Tran

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-10 and 17-20 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 14-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ito et al. U.S. Patent 5,852,784.

Regarding claims 1 and 11, Ito et al. discloses, in figure 1, a multi-band mobile unit communication apparatus comprising an antenna 1 for receiving multiple frequency bands of radio wave signals, a first local oscillation circuit 10 for generating a first local oscillation signal corresponding to the multiple frequency bands of radio wave signals, first and second receiving circuits 19 and 10, an intermediate frequency switch 11 responsive to a switching control signal 30 indicative of which frequency bands the mobile unit is operating for outputting the first intermediate frequency signal 8a corresponding to the mobile communication system A and outputting the second intermediate frequency signal 9a corresponding to the mobile communication system B, a radio frequency switch 21 responsive to the switching control signal 30, and quadrature demodulation circuit 13 for demodulating and outputting baseband I and Q signals. The quadrature demodulation circuit 13 includes a pair of mixers 13a and 13c,

Art Unit: 2631

a local oscillator 18 including a VCO for generating a local oscillator signal, a reference signal 23a and a phase shifter 13b for shifting the phase of the local oscillator signal based on switching control signal 30.

2. Claims 2-3 and 12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamaguchi et al. U.S. Patent 5,966,666.

Regarding claim 2, Yamaguchi et al. discloses in figure 1 a multiple band mobile transceiver comprising a transmission portion, a receiver portion, duplexers 2 and 3 corresponding to two respective radio frequency bands. The transmission portion includes a quadrature modulator 13 for quadrature modulating the transmission I and Q signals, a voltage control oscillator (VCO) 32 for providing a local oscillation signal to the frequency division and distribution section 33, a high frequency switch 8 for the transmission frequency band concerned. The frequency division and distribution section 33 consists of frequency dividers 41, 42, 44, and 45 and switches 43 and 46. The quadrature modulator 13 comprises a pair of mixers 13, the voltage control oscillator (VCO) 32, and a phase shifter $\frac{1}{2}$.

Regarding claims 3 and 13, the transmission portion is described in claim 2 above. Similarly, referring to figure 1 again, the receiving portion comprises a quadrature demodulating circuit 27 for quadrature demodulating the amplified intermediate frequency from the variable gain amplifier 26, the voltage control oscillator (VCO) 32 for providing a local oscillation signal to both the quadrature modulator 13 and

Art Unit: 2631

the quadrature demodulator 27 through the frequency division and distribution section 33, and phase shifters $\frac{1}{2}$ connecting to the switch 46.

Allowable Subject Matter

3. Claims 7-10 and 17-20 are allowed.

4. Claims 4-6 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Objections

5. Claim 1 is objected to because of the following informalities: in line 4, "comprising" should be changed to -- comprising: --. Appropriate correction is required.

6. Claim 2 is objected to because of the following informalities: in line 3, "mutliband" should be changed to -- multiband --. Appropriate correction is required.

Drawings

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of claim 9, page 95, line 24 through page 96, line 12, must be shown or the feature(s) canceled

Art Unit: 2631

from the claim(s). Similarly, the features of claim 19, page 103, line 7 through page 104, line 2, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Conclusion

8. The prior art made of record and not relied upon could be considered pertinent to applicant's disclosure:

A list of references cited by the Examiner is shown on the PTO-892.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 703-305-2384. The examiner can normally be reached on Tuesday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.


Application/Control Number: 09/535,303

Page 6

Art Unit: 2631

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.

KCT
May 9, 2003


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 5/12/03